with TWC that this collaboration must be a central tenet in the efforts to implement the CVAA.[153] For example, as Microsoft states, "a laptop manufacturer that builds ACS into its device will need to consult with the developer of the operating system to develop this functionality, and in that way the operating system provider will be deeply involved in solving these problems and promoting innovations in accessibility, such as making an accessibility API available to the manufacturer."[154] The consumer, who is not a party to any arrangements or agreements, contractual or otherwise, between an end user equipment manufacturer and a software developer, will not be put in the position of having to divine which entity is ultimately responsible for the accessibility of end user equipment used for advanced communications services.

71. We recognize that consumers are able to change many of the software components of the equipment they use for advanced communications services, including, for some kinds of equipment, the operating systems, e-mail clients, and other installed software used for ACS. We believe that, as a practical matter, operating systems and other software that are incorporated by manufacturers into their equipment will also be accessible when made separately available because it will not be efficient or economical for developers of software used to provide ACS to make accessible versions of their products for equipment manufacturers that pre-install the software and non-accessible freestanding versions of the same products. Therefore, we believe that we do not need to adopt an expansive interpretation of the scope of Section 716(a) to ensure that consumers receive the benefits intended by Congress.

72. Section 717(b)(1) of the Act requires us to report to Congress every two years, beginning in 2012. We are required, among other things, to report on the extent to which accessibility barriers still exist with respect to new communications technologies. We intend to pay particular attention in these reports to the question of whether entities that are not directly subject to our regulations, including software developers, are causing such barriers to persist.

73. Finally, the narrower interpretation of the scope of Section 716(a) that we adopt today makes this statutory program more cost-effective than would the more expansive interpretation. Covered entities are subject not only to the substantive requirement that they make their products accessible, if achievable, but also to an enforcement mechanism that includes recordkeeping and certification requirements. This type of enforcement program imposes costs on both industry and the government. Congress made a determination, which we endorse and enforce, that these costs are well justified to realize the accessibility benefits that the CVAA will bring about. But the costs of extending design, recordkeeping, and certification requirements to software developers would be justified only if they were outweighed by substantial additional accessibility benefits.

74. As explained above, it appears that the benefits of accessibility, as envisioned by Congress and supporters of the CVAA, can be largely (and perhaps entirely) realized under the narrower, less costly interpretation of Section 716(a)(1). Furthermore, the biennial review requirement of Section 717(b)(1) ensures that, if our prediction proves incorrect, the Commission will have an occasion to examine whether application of the CVAA's requirements directly to developers of consumer-installed software is warranted, and make any necessary adjustments to our rules to achieve accessibility in accordance with the intent of the CVAA. This biennial

[153] TWC cautions that requiring service providers to offer particular capabilities (*i.e.*, accessible services) risks being largely meaningless if equipment manufacturers are not required to build the requisite functionality into their consumer devices, and urges the Commission to hold manufacturers to their obligations under the CVAA. TWC Comments at 7.

[154] Microsoft Comments at 12.

review process gives us additional confidence that applying the statute more narrowly and cautiously in our initial rules is the most appropriate policy at this time.

75. With respect to the definition of "manufacturer," consistent with the Commission's approach in the *Section 255 Report and Order* and in the *Accessibility NPRM*, we define "manufacturer" as "an entity that makes or produces a product."[155] As the Commission noted in the *Section 255 Report and Order*, "[t]his definition puts responsibility on those who have direct control over the products produced, and provides a ready point of contact for consumers and the Commission in getting answers to accessibility questions and resolving complaints."[156] We believe this definition encompasses entities that are "extensively involved in the manufacturing process – for example, by providing product specifications."[157] We also believe this definition includes entities that contract with other entities to make or produce a product; a manufacturer need not own a production facility or handle raw materials to be a manufacturer.[158]

76. TechAmerica argues that Section 716(a) should apply only to equipment with a "primary purpose" of offering ACS.[159] We reject this interpretation. As discussed above,[160] consumers commonly access advanced communications services through general purpose devices. The CVAA covers equipment "used for ACS,"[161] and we interpret this to include general purpose hardware with included software that provides users with access to advanced communications services.

77. Commenters also expressed concerns about the impact of software upgrades on accessibility. The IT and Telecom RERCs state that "[u]pgrades can be used to increase accessibility . . . or they can take accessibility away, as has, unfortunately occurred on numerous occasions."[162] Wireless RERC urges that "[e]nd-users who buy an accessible device expect manufacturer-provided updates and upgrades to continue to be accessible."[163] We agree that the purposes of the CVAA would be undermined if it permitted equipment or services that are originally required to be accessible to become inaccessible due to software upgrades. In accordance with our interpretation of 716(a)(1) above, just as a manufacturer of a device is responsible for the accessibility of included software, that manufacturer is also responsible for ensuring that the software developer maintains accessibility if and when it provides upgrades.

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[155] *In accord*, CEA Comments at 8; T-Mobile Comments at 4-5 (adopting this definition will help "draw a bright line" between service providers and manufacturers).

[156] *Section 255 Report and Order*, 16 FCC Rcd at 6454, ¶ 90.

[157] *Section 255 Report and Order*, 16 FCC Rcd at 6454, ¶ 90. *See also* ITI Comments at 25.

[158] *See* the North American Industry Classification System ("NAICS") definition of "manufacturing," which includes "establishments [that] may process materials or may contract with other establishments to process their materials for them." 2007 NAICS Definition, Section 31-33 Manufacturing, http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=31&search=2007%20NAICS%20Search. *See also* Exemptions for Small Entities – Temporary Exemption of Section 716 Requirements, Section III.C.3, *infra,* for a detailed discussion of NAICS.

[159] TechAmerica Comments at 3.

[160] *See* para. 67, *supra*. *See also* para. 49, *supra*.

[161] 47 U.S.C. § 617(a)(1).

[162] IT and Telecom RERCs Comments at 3.

[163] Wireless RERC Comments at 2. *See also* Words+ and Compusult Comments at 7.

However, we agree with CTIA that a manufacturer cannot be responsible for software upgrades "that it does not control and that it has no knowledge the user may select and download."[164]

78. Indeed, we recognize more generally, as ITI urges, that manufacturers of equipment are not responsible for the components over which they have no control.[165] Thus, manufacturers are not responsible for software that is independently selected and installed by users, or for software that users choose to access in the cloud.[166] Furthermore, we generally agree with commenters that a manufacturer is not responsible for optional software offered as a convenience to subscribers at the time of purchase and that carriers are not liable for third-party applications that customers download onto mobile devices – even if software is available on a carrier's website or application store.[167]

79. A manufacturer, however, has a responsibility to consider how the components in the architecture work together when it is making a determination about what accessibility is achievable for its product. If, for example, a manufacturer decides to rely on a third-party software accessibility solution, even though a built-in solution is achievable, it cannot later claim that it is not responsible for the accessibility of the third-party solution.[168] A manufacturer of end-user equipment is also responsible for the accessibility of software offered to subscribers if the manufacturer requires or incentivizes a purchaser to use a particular third-party application to access all the features of or obtain all the benefits of a device or service, or markets its device in conjunction with a third-party add-on.[169]

80. Because we did not receive a full record on the unique challenges associated with implementing Section 718, we will solicit further input in the accompanying *Further Notice* on how we should proceed. In particular, we seek comment on the unique technical challenges associated with developing non-visual accessibility solutions for web browsers in a mobile phone and the steps that we can take to ensure that covered entities will be able to comply with these requirements on October 8, 2013, the date on which Section 718 becomes effective. Section 718 requires a mobile phone manufacturer that includes a browser, or a mobile phone service provider that arranges for a browser to be included on a mobile phone, to ensure that the browser functions are accessible to and usable by individuals who are blind or have a visual impairment, unless doing so is not achievable. In the accompanying *Further Notice*, we also seek to develop a record on whether Internet browsers should be considered software generally subject to the requirements of Section 716. Specifically, we seek to clarify the relationship between Sections 716 and 718 and solicit comment on the appropriate regulatory approach for Internet browsers that are not built into mobile phones.

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[164] CTIA Comments at 10.

[165] *See* Letter from Ken J. Salaets, Director, Information Technology Industry Council, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 10-213 (filed Aug. 9, 2011) at 1-2 ("ITI Aug. 9 *Ex Parte*").

[166] See, *e.g.*, AT&T Comments at 8-9: CTIA Comments at 10; IT and Telecom RERCs Comments at 3; Microsoft Comments at 12; TechAmerica Comments at 2; Wireless RERC Comments at 2.

[167] CTIA Comments at 11; Verizon Comments at 3-4.

[168] *See* Verizon Comments at 3-4.

[169] IT and Telecom RERCs Comments at 4-5. *See also* Words+ and Compusult Comments at 9-10 (suggesting that the service provider should be responsible for accessibility of an application that is "either branded as the service provider's own or is the sole endorsed option or application in a category" and that service providers should be required to include descriptions of the accessibility interfaces within their software developer kits for third-party developers, along with best practices for accessible user interfaces).

3. Providers of Advanced Communications Services

81. *Background.* Section 716(b)(1) of the Act provides that, with respect to service providers, after the effective date of applicable regulations established by the Commission and subject to those regulations, a "provider of advanced communications services shall ensure that such services offered by such provider in or affecting interstate commerce are accessible to and usable by individuals with disabilities," unless these requirements are "not achievable."[170]

82. In the *Accessibility NPRM*,[171] and consistent with the *Section 255 Report and Order*,[172] the Commission proposed to find that providers of advanced communications services include all entities that make advanced communications services available in or affecting interstate commerce, including resellers and aggregators. The Commission also proposed to find that "providers of advanced communications services" include entities that provide advanced communications services over their own networks as well as providers of applications or services accessed (*i.e.*, downloaded and run) by users over other service providers' networks, as long as these advanced communications services are made available in or affecting interstate commerce.[173]

83. The Commission also asked whether there are any circumstances in which a service provider would be responsible for the accessibility of third-party services and applications or whether Section 2(a) of the CVAA would generally preclude such a result.[174] Finally, the Commission sought comment on the meaning of offered "in or affecting interstate commerce" and whether there are any circumstances in which advanced communications services that are downloaded or run by the user would not meet this definition.[175]

84. *Discussion.* Consistent with the proposal in the *Accessibility NPRM*, we agree with commenters that state that we should interpret the term "providers" broadly and include all entities that make available advanced communications in whatever manner.[176] Such providers include, for example, those that make web-based e-mail services available to consumers; those that provide non-interconnected VoIP services through applications that consumers download to their devices; and those that provide texting services over a cellular network.

85. As is the case with manufacturers, providers of ACS are responsible for ensuring the accessibility of the underlying components of the service, to the extent that doing so is achievable. For example, a provider of a web-based e-mail service could meet its obligations by ensuring its services are coded to web accessibility standards (such as the Web Content

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[170] *See* 47 U.S.C. § 617(b)(1).

[171] *Accessibility NPRM*, 26 FCC Rcd at 3144, ¶ 26.

[172] *See Section 255 Report and Order*, 16 FCC Rcd at 6450, ¶ 80. The Commission also noted its belief that the general principle it adopted in the *Section 255 Report and Order* – that "Congress intended to use the term 'provider' broadly . . . to include all entities that make telecommunications services available" – applies in this context as well. *Accessibility NPRM*, 26 FCC Rcd at 3144, ¶ 26, *citing Section 255 Report and Order*, 16 FCC Rcd at 6450, ¶ 80.

[173] *Accessibility NPRM*, 26 FCC Rcd at 3144, ¶ 27.

[174] *Accessibility NPRM*, 26 FCC Rcd at 3144, ¶ 27.

[175] *Accessibility NPRM*, 26 FCC Rcd at 3144, ¶ 27.

[176] Consumer Groups Comments at 5-6.

Accessibility Guidelines (WCAG)[177]), if achievable. For services downloaded onto the OS of a desktop or mobile device, service providers could meet their obligations by ensuring, if achievable, that their services are coded so they can work with the Accessibility API for the OS of the device.[178] Those that provide texting services over a cellular network, for example, must ensure that there is nothing in the network that would thwart the accessibility of the service, if achievable.

86. COAT raises the concern that some software used for ACS may be neither a component of the end user equipment nor a component of a service and thus would not be covered under the statute.[179] Specifically, COAT argues that H.323[180] video and audio communication is peer-to-peer and does not require a service provider at all.[181] Similarly, it argues that it is possible to have large-scale examples of peer-to-peer systems without service providers and that models used in the non-ACS context could be expanded to be used for ACS.[182] We believe that COAT construes the meaning of "provider of advanced communications services" too narrowly. If software gives the consumer the ability to send and receive e-mail, send and receive text messages, make non-interconnected VoIP calls, or otherwise engage in

[177] Web Content Accessibility Guidelines ("WCAG") explain how to make web content (*e.g.*, information in a web page or web application, including text, images, forms, and sounds) more accessible to people with disabilities. *See* http://www.w3.org/WAI/intro/wcag.php (viewed on September 16, 2011). The WCAG is developed and published by the W3C Web Accessibility Initiative and provides an international forum for industry, disability organizations, accessibility researchers, and government stakeholders. The WCAG is part of a series of accessibility guidelines, including the Authoring Tool Accessibility Guidelines ("ATAG") and the User Agent Accessibility Guidelines ("UAAG"). *Id.* *See* also para. 101, *infra* (discussing the WCAG).

[178] Accessibility APIs are specialized interfaces developed by platform owners, which software applications use to communicate accessibility information about user interfaces to assistive technologies. HTML to Platform Accessibility APIs Implementation Guide, W3C Editor's Draft 10 June 2011, available at http://dev.w3.org/html5/html-api-map/overview.html#intro_aapi (viewed September 15, 2011).

[179] Letter from Andrew S. Phillips, Counsel to National Association of the Deaf, on behalf of the Coalition of Organizations for Accessible Technology (COAT), to Marlene H. Dortch, Secretary, FCC, CG Docket No. 10-213, at 1-2 (filed Sept. 20, 2011) ("COAT Sept. 20 *Ex Parte*"); COAT Sept. 28 *Ex Parte* at 1-2.

[180] H.323 is an ITU Telecommunication Standardization Sector (ITU-T) specification for transmitting audio, video, and data across an Internet Protocol network, including the Internet. The H.323 standard addresses call signaling and control, multimedia transport and control, and bandwidth control for point-to-point and multi-point conferences. Products and applications that are compliant with H.323 can communicate and interoperate with each other. *See* http://www.itu.int/rec/T-REC-H.323/en/ (last visited September 27, 2011); Jonathan Davidson, Brian Gracely & James Peters, Voice over IP fundamentals pp. 229–230 (Cisco Press 2000).

[181] COAT Sept. 20 *Ex Parte* at 2; COAT Sept. 28 *Ex Parte* at 1-2.

[182] COAT suggests that it is possible for ACS to follow the model of such large scale peer-to-peer systems as Diaspora and Bit Torrent. COAT Sept. 20 *Ex Parte* at 2; COAT Sept. 28 *Ex Parte* at 2. Diaspora is an open-source, social networking software that provides a decentralized, peer-to-peer alternative to commercial alternatives such as Facebook and LinkedIn by allowing participants to retain ownership of all the material they use on the site, and retain full control over how that information is shared. *See* https://joindiaspora.com/; *see also* http://www.pcworld.com/businesscenter/article/211526/opensource_social_network_diaspora_goes_live.html. BitTorrent is a peer-to-peer, closed software program that allows end users to upload or download files and to share files with each other on a distributed basis. *See* http://www.bittorrent.com/.

advanced communications, then provision of that software is provision of ACS.[183] The provider of that software would be a covered entity, and the service, including any provided through a small-scale or large-scale peer-to-peer system, would be subject to the requirements of the statute.[184] This is true regardless of whether the software is downloaded to the consumer's equipment or accessed in the cloud.

87. We disagree with Verizon's assertion that the requirement in Section 716(e)(1)(C) that the Commission shall "determine the obligations *under this section* of manufacturers, service providers, and providers of applications or services accessed over service provider networks"[185] compels the conclusion that developers of applications have their own independent accessibility obligations.[186] We note that the regulations that the Commission must promulgate pursuant to Section 716(e) relate to the substantive requirements of the Act found in Sections 716(a)-(d) encompassing accessibility (716(a) and 716(b)); compatibility (716(c)); and network features, functions, and capabilities (716(d)). Each of these obligations applies to manufacturers of ACS equipment and/or providers of ACS. There are no independent substantive requirements in these sections that apply to "providers of applications or services accessed over service provider networks." We believe the most logical interpretation of this phrase is the one proposed in the *NPRM*: that providers of advanced communications services include entities that provide advanced communications services over their own networks as well as providers of applications or services accessed (*i.e.*, downloaded and run) by users over other service providers' networks.[187] We adopt this interpretation today, which we believe comports with our analysis above that providers of ACS are responsible for ensuring the accessibility of the underlying components of the service, including the software applications, to the extent that doing so is achievable.

88. We find, however, that a provider of advanced communications services is not responsible for the accessibility of third-party applications and services that are not components of its service and that the limitations on liability in Section 2(a) of the CVAA generally preclude such service provider liability.[188] This approach is consistent with commenters that argue that

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[183] On the other hand, provision of client software such as Microsoft Outlook is not provision of ACS. While consumers use such client software to manage their ACS, the client software standing alone does not provide ACS.

[184] We also disagree with COAT's suggestion that ACS used with an online directory would not be covered. COAT Sept. 28 *Ex Parte* at 2. While online directories are excluded from coverage under the limited liability provisions in Section 2(a)(2) of the CVAA, the ACS used with such directories are covered.

[185] 47 U.S.C. § 716(e)(1)(C) (emphasis added).

[186] Verizon Comments at 3-4.

[187] *Accessibility NPRM*, 26 FCC Rcd at 3144, ¶ 27. *See also* IT and Telecom RERCs at 6-7; Words+ and Compusult Comments at 10. Other commenters assert that aggregators and resellers should also be covered. *See* Consumer Groups Comments at 5; AFB Reply Comments at 3-4.

[188] *See, e.g.*, AT&T Comments at 8-9; CTIA Comments at 10; Microsoft Comments at 12; NetCoalition Comments at 4; Verizon Comments at 3-4; Words+ and Compusult Comments at 10. CTIA also notes that Section 2(a) exempts from liability providers of networks over which advanced communications services are accessed. CTIA Comments at 10-11. *See also* Senate Report at 5; House Report at 22 ("Section 2 provides liability protection where an entity is acting as a passive conduit of communications made available through the provision of advanced communications services by a third party . . ."). *See also* T-Mobile Comments at 4 (service providers like T-Mobile are not responsible for the accessibility of third-
(continued....)

service providers and manufacturers should be responsible only for those services and applications that they provide to consumers.[189] They explain that they have no control over third party applications that consumers add on their own and that such third party applications have the potential to significantly alter the functionality of devices.[190] Notwithstanding that conclusion and consistent with Section 2(b) of the CVAA, we also agree with commenters that the limitation on liability under Section 2(a) does not apply in situations where a provider of advanced communications services relies on a third-party application or service to comply with the accessibility requirements of Section 716.[191]

89. We also confirm that providers of advanced communications services may include resellers and aggregators,[192] which is consistent with the approach the Commission adopted in the *Section 255 Report and Order*.[193] Several commenters support that conclusion.[194] We disagree with Verizon's suggestion that, to the extent that a carrier is strictly reselling an advanced communications service as is (without alteration), the sole control of the features and functions rests with the underlying service provider, not the reseller, and the reseller should not have independent compliance obligations.[195] To the extent that the underlying service provider makes those services accessible to and usable by individuals with disabilities in accordance with the CVAA mandates, those services should remain accessible and usable when resold as is (without alteration). Resellers offer services to consumers who may or may not be aware of the identity of the underlying service provider. It is both logical and in keeping with the purposes of the CVAA for consumers to be able to complain against the provider from whom they obtain a service, should that service be inaccessible. While a reseller may not control the features of the underlying service, it does have control over its decision to resell that service. Its obligation, like that of any other ACS provider, is to ensure that the services it provides are accessible, unless that is not achievable.

90. Because the networks used for advanced communications services are interstate in nature, and the utilization of equipment, applications and services on those networks are also

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party services and applications); NCTA Reply Comments at 2-3 (networks, acting as conduits, are not liable for the accessibility of services that travel over their networks); T-Mobile Reply Comments at 6. *See also* Network Features, Section III.A.4.c, and Accessibility of Information Content, Section III.A.4.d, *infra*, discussing other obligations of providers of advanced communications and network services.

[189] *See, e.g.*, AT&T Comments at 8; CTIA Comments at 10; Microsoft Comments at 12-13; NetCoalition Comments at 4-5; Verizon Comments at 3-4.

[190] *See, e.g.*, AT&T Comments at 8-9; Microsoft Comments at 13.

[191] CTIA Comments at 10; Verizon Comments at 4. *See also* Pub. L. No. 111-260, § 2(b).

[192] "Aggregator" is defined as "any person that, in the ordinary course of its operations, makes telephone services available to the public or to transient users of its premises, for interstate telephone calls using a provider of operator services." 47 U.S.C. § 226(a)(2).

[193] "[W]ith respect to section 255, Congress intended to use the term 'provider' broadly, to include all entities that make telecommunications services available." *Section 255 Report and Order*, 16 FCC Rcd at 6450, ¶ 80. The Commission explained that an aggregator is a "provider of telecommunications service," even though 47 U.S.C. § 153(50) excludes aggregators from the definition of "telecommunications carrier." *Section 255 Report and Order*, 16 FCC Rcd at 6450, ¶ 80.

[194] *See, e.g.*, Consumer Groups Comments at 5-6; IT and Telecom RERCs Comments at 5; Words+ and Compusult Comments at 9. *But see* Verizon Comments at 4-5.

[195] Verizon Comments at 4-5.

interstate in nature, we conclude that the phrase "in or affecting interstate commerce" should be interpreted broadly.[196] Nonetheless, the IT and Telecom RERCs suggest that an entity that has its own network "completely off the grid, that it creates and maintains, and that does not at any time connect to another grid" would not be covered.[197] We agree that advanced communication services that are available only on a private communications network that is not connected to the Internet, the public switched telephone network ("PSTN"), or any other communications network generally available to the public may not be covered when such services are not "offered in or affecting interstate commerce." An example of a private communications network is a company internal communications network. Nonetheless, where such providers of advanced communications services are not covered by Section 716, they may have accessibility obligations under other disability related statutes, such as Section 504 of the Rehabilitation Act of 1973[198] or the Americans with Disabilities Act of 1990.[199]

4. General Obligations

91. Section 716(e)(1)(C) of the Act requires the Commission to "determine the obligations...of manufacturers, service providers, and providers of applications or services accessed over service provider networks."[200] Below, we discuss the obligations of manufacturers and service providers, including the obligations of providers of applications or services accessed over service provider networks.

a. Manufacturers and Service Providers

92. *Background.* With respect to equipment manufacturers and service providers of ACS, the Commission proposed in the *Accessibility NPRM* to adopt general obligations that mirror the language of the statute, similar to the approach taken in sections 6.5 and 7.5 of the Commission's Section 255 rules.[201] The Commission also proposed to adopt requirements similar to those in its Section 255 rules regarding product design, development, and evaluation (sections 6.7 and 7.7); information pass through (sections 6.9 and 7.9); and information, documentation and training (sections 6.11 and 7.11), modified to reflect the statutory requirements of Section 716.[202]

93. *Discussion.* As set forth below, we adopt into our rules the general obligations contained in Sections 716(a)-(e).[203] As the Commission did in the *Section 255 Report and Order*, we find that a functional approach will provide clear guidance to covered entities regarding what they must do to ensure accessibility and usability.[204] Consistent with AFB's comments, we

[196] *See* IT and Telecom RERCs Comments at 7.

[197] IT and Telecom RERCs Comments at 7. *See also* ITI Comments at 22 ("A service is an offering *to others*; it is not software or a functionality developed by an entity solely for internal use. Accordingly, a system that is developed by an individual or organization and not sold to the public cannot be considered covered by the CVAA.").

[198] *See* 29 U.S.C. § 794.

[199] *See* 42 U.S.C. §§ 12101-12213; *see also* ITI Comments at 21.

[200] 47 U.S.C. § 617(e)(1)(C).

[201] *Accessibility NPRM,* 26 FCC Rcd at 3170, ¶ 100.

[202] *Accessibility NPRM*, 26 FCC Rcd at 3170-3171, ¶¶ 101-102.

[203] *See* 47 U.S.C. §§ 716(a) – (e).

[204] *See Section 255 Report and Order*, 16 FCC Rcd at 6429-6430, ¶ 22.

modify our rules as proposed to make clear that any third party accessibility solution that a covered entity uses to meet its accessibility obligations must be "available to the consumer at nominal cost and that individuals with disabilities can access."[205]

- With respect to equipment manufactured after the effective date of the regulations, a manufacturer of equipment used for advanced communications services, including end user equipment, network equipment, and software, must ensure that the equipment and software that such manufacturer offers for sale or otherwise distributes in interstate commerce shall be accessible to and usable by individuals with disabilities, unless such requirements are not achievable.[206]
- With respect to services provided after the effective date of the regulations, a provider of advanced communications services must ensure that services offered by such provider in or affecting interstate commerce are accessible to and usable by individuals with disabilities, unless such requirements are not achievable.[207]
- If accessibility is not achievable either by building it into a device or service or by using third-party accessibility solutions available to the consumer at nominal cost and that individuals with disabilities can access, then a manufacturer or service provider shall ensure that its equipment or service is compatible with existing peripheral devices or specialized customer premises equipment commonly used by individuals with disabilities to achieve access, unless such compatibility is not achievable.[208]
- Providers of advanced communications services shall not install network features, functions, or capabilities that impede accessibility or usability.[209]
- Advanced communications services and the equipment and networks used to provide such services may not impair or impede the accessibility of information content when accessibility has been incorporated into that content for transmission through such services, equipment, or networks.[210]

94. We further adopt in our rules the following key requirements, supported by the IT and Telecom RERCs,[211] with some non-substantive modifications to clarify the rules proposed in the *Accessibility NPRM*.[212] These requirements are similar to sections 6.7 – 6.11 of our Section 255 rules[213] but are modified to reflect the statutory requirements of Section 716:

- Manufacturers and service providers must consider performance objectives at the design stage as early and as consistently as possible and must implement such evaluation to the extent that it is achievable.

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[205] AFB Comments at 3; AAPD Reply Comments at 3.

[206] *See* 47 U.S.C. § 617(a)(1).

[207] *See* 47 U.S.C. § 617(b)(1).

[208] *See* 47 U.S.C. § 617(c).

[209] *See* 47 U.S.C. § 617(d).

[210] *See* 47 U.S.C. § 617(e)(1)(B).

[211] IT and Telecom RERCs Comments at 33.

[212] *Accessibility NPRM*, 26 FCC Rcd at 3170-71, ¶ 101.

[213] *See* 47 C.F.R. §§ 6.7 – 6.11.

- Manufacturers and service providers must identify barriers to accessibility and usability as part of such evaluation.[214]
- Equipment used for advanced communications services must pass through cross-manufacturer, nonproprietary, industry-standard codes, translation protocols, formats, or other information necessary to provide advanced communications services in an accessible format, if achievable. Signal compression technologies shall not remove information needed for access or shall restore it upon decompression.
- Manufacturers and service providers must ensure access by individuals with disabilities to information and documentation it provides to its customers, if achievable. Such information and documentation includes user guides, bills, installation guides for end user devices, and product support communications, in alternate formats, as needed. The requirement to provide access to information also includes ensuring that individuals with disabilities can access, at no extra cost, call centers and customer support regarding both the product generally and the accessibility features of the product.[215]

b. Providers of Applications or Services Accessed over Service Provider Networks

95. *Background.* Section 716(e)(1)(C) requires the Commission to "determine the obligations under . . . section [716] of manufacturers, service providers, and providers of applications or services accessed over service provider networks."[216] In the *Accessibility NPRM*, the Commission sought comment on what, if any, obligations it should impose on providers of applications or services accessed over service provider networks.[217] The Commission also sought comment on the meaning of the phrase "accessed over service provider networks" and how it applies to applications and services that are downloaded and then run as either native or web applications on the device or to those applications and services accessed through cloud computing.[218]

96. *Discussion.* As noted previously, to the extent they provide advanced communications services, "providers of applications or services accessed over service provider networks" are "providers of advanced communications services" and have the same obligations when those services are accessed over the service provider's own network or over the network of another service provider.[219] No party suggested that any additional obligations apply to this

[214] Samuelson-Glushko TLPC argues that "[u]ser testing requirements are vital to ensure usable and viable technology access to citizens with disabilities." Samuelson-Glushko Reply Comments at 4. While we will not impose specific user testing requirements, we support the practice of user testing and agree with Samuelson-Glushko that user testing benefits individuals with a wide range of disabilities. Samuelson-Glushko Reply Comments at 4-5.

[215] The IT and Telecom RERCs urge that all information provided with or for a product be available online in accessible form. IT and Telecom RERCs Comments at 33. Although we will not require manufacturers and service providers to build websites, to the extent that they provide customer support online, such websites must be accessible, if achievable.

[216] 47 U.S.C. § 617(e)(1)(C).

[217] *Accessibility NPRM,* 26 FCC Rcd at 3144, 3171, ¶¶ 27, 103.

[218] *Accessibility NPRM,* 26 FCC Rcd at 3171, ¶ 103.

[219] *See* Providers of Advanced Communications Services, Section III.A.3, *supra.*

subset of providers of ACS, and we do not adopt any today.[220]

c. Network Features

97. *Background.* According to Section 716(d) of the Act, "[e]ach provider of advanced communications services has the duty not to install network features, functions, or capabilities that impede accessibility or usability."[221] In the *Accessibility NPRM*, the Commission proposed incorporating Section 716(d)'s requirements into the Commission's rules, as the Commission's Section 255 rules reflect the cognate language in Section 251(a)(2).[222] Both the Senate and House Reports state that the obligations imposed by Section 716(d) "apply where the accessibility or usability of advanced communications services were incorporated in accordance with recognized industry standards."[223] In the *Accessibility NPRM*, the Commission sought comment on whether it should "refrain from enforcing these obligations on network providers" until the Commission identifies and requires the use of industry-recognized standards.[224]

98. *Discussion.* As proposed in the *Accessibility NPRM*, we adopt rules that include the requirements set forth in Section 716(d), just as our Section 255 rules reflect the language in Section 251(a)(2). Commenters generally agree that the duty not to impede accessibility is comparable to the duty set forth in Section 251(a)(2) of the Act.[225]

99. As stated above, this obligation applies when the accessibility or usability of ACS is incorporated in accordance with recognized industry standards.[226] We agree with industry and consumer commenters that suggest that stakeholder working groups should be involved in developing new accessibility standards.[227] As explained in the next section, we believe that there are several potential mechanisms to develop these standards.[228] Accordingly, we recommend that stakeholders either use existing working groups or establish new ones to develop standards that will ensure accessibility as the industry applies network management practices, takes digital rights management measures, and engages in other passive or active activities that may impede accessibility.[229] We do not agree, however, that we should wait to require compliance with our rules governing network features until an industry working group "formulates and offers such standards for the industry."[230] We agree with ACB that "existing standards and expertise will ensure that manufacturers have sufficient functional approaches" on which to base accessibility

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[220] *But see* para. 86, *supra.*

[221] *See* 47 U.S.C. § 617(d).

[222] *Accessibility NPRM,* 26 FCC Rcd at 3168, ¶ 92.

[223] Senate Report at 8; House Report at 25.

[224] *Accessibility NPRM,* 26 FCC Rcd at 3168, ¶ 93; CTIA Comments to *October Public Notice* at 15.

[225] AAPD Reply Comments to *October Public Notice* at 4; AFB Reply Comments to *October Public Notice* at 5; Verizon Comments to *October Public Notice* at 5.

[226] *See* Senate Report at 8; House Report at 25.

[227] CTIA Comments at 29; IT and Telecom RERCs Comments at 30.

[228] *See* Accessibility of Information Content, Section III.A.4.d, *infra.*

[229] CTIA Comments at 29; CEA Comments at 30-31; Consumer Groups Comments at 22; IT and Telecom RERCs Comments at 29-30; T-Mobile Comments at 12; CTIA Reply Comments at 25-26; T-Mobile Reply Comments at 13-14.

[230] ACB Reply Comments at 37. *But see* CTIA Comments at 29.

and that "[f]urther experience and products will improve this process."[231] We believe this approach provides certainty through the use of recognized industry standards while at the same time recognizing the importance of not unnecessarily delaying the development of accessibility solutions.

d. Accessibility of Information Content

100. *Background.* Section 716(e)(1)(B) of the Act states that the Commission's regulations shall "provide that advanced communications services, the equipment used for advanced communications services, and networks used to provide [such services] may not impair or impede the accessibility of information content when accessibility has been incorporated into that content for transmission through [such services, equipment or networks]."[232] The legislative history of the CVAA makes clear that these requirements apply "where the accessibility of such content has been incorporated in accordance with recognized industry standards."[233] In the *October Public Notice*, the Bureaus sought comment on how Section 716(e)(1)(B) of the Act should be implemented and the types and nature of information content that should be addressed.[234] Several commenters stressed the importance of developing industry-recognized standards to ensure the delivery of information content.[235] In the *Accessibility NPRM*, the Commission sought further comment on developing industry-recognized standards and how they should be reflected in the Commission's rules, subject to the limitation on mandating technical standards in Section 716(e)(1)(D).[236] In particular, the Commission sought comment on the RERC-IT proposal that our regulations need to ensure that (i) "the accessibility information (*e.g.*, captions or descriptions) are not stripped off when information is transitioned from one medium to another;"[237] (ii) "parallel and associated media channels are not disconnected or blocked;"[238] and (iii) "consumers . . . have the ability to combine text, video, and audio streaming from different origins."[239] The Commission also sought comment on the best way it could ensure that encryption and other security measures do not thwart accessibility,[240] while at the same time ensuring that it promotes "network security, reliability, and survivability in broadband

[231] ACB Reply Comments at 38.

[232] 47 U.S.C. § 617(e)(1)(B).

[233] Senate Report at 8; House Report at 25.

[234] *October Public Notice* at 4.

[235] CEA Comments to *October Public Notice* at 14; T-Mobile Comments to *October Public Notice* at 5; CTIA Reply Comments to *October Public Notice* at 16.

[236] *Accessibility NPRM,* 26 FCC Rcd at 3169, ¶ 96.

[237] *Accessibility NPRM,* 26 FCC Rcd at 3169, ¶ 96 (citing RERC-IT Comments to *October Public Notice* at 7). At the public notice stage, Gregg Vanderheiden first filed comments for RERC-IT but all subsequent fillings (reply comments at the public notice stage and comments and reply comments at the NPRM stage) were filed under the collective name of the IT and Telecom RERCs. In their Comments to the NPRM, the IT and Telecom RERCs modified section (i) of its original proposal to read "the accessibility information (*e.g.*, captions or descriptions) are not stripped off when information is transitioned from one medium to another *using industry standards"* (emphasis added).

[238] *Accessibility NPRM,* 26 FCC Rcd at 3169, ¶ 96.

[239] *Accessibility NPRM,* 26 FCC Rcd at 3169, ¶ 96.

[240] *Accessibility NPRM,* 26 FCC Rcd at 3169, ¶ 96 (citing ACB Reply Comments to *October Public Notice* at 19).

networks."[241]

101. *Discussion.* As proposed in the *Accessibility NPRM*, we adopt a rule providing that "advanced communications services and the equipment and networks used with these services may not impair or impede the accessibility of information content when accessibility has been incorporated into that content for transmission through such services, equipment or networks."[242] This rule incorporates the text of Section 716(e)(1)(B) and is also consistent with the Commission's approach in the *Section 255 Report and Order*.[243] We believe that this rule is broad enough to disapprove of accessibility information being "stripped off when information is transitioned from one medium to another" and thus find it unnecessary to add this specific language in the rule itself, as originally suggested by the IT and Telecom RERCs.[244]

102. The legislative history of the CVAA makes clear that the requirement not to impair or impede the accessibility of information content applies "where the accessibility of such content has been incorporated in accordance with recognized industry standards."[245] We agree with the IT and Telecom RERCs that sources of industry standards include: (1) international standards from an international standards body; (2) standards created by other commonly recognized standards groups that are widely used by industry; (3) de-facto standards created by one company, a group of companies, or industry consortia that are widely used in the industry.[246] We believe that these examples illustrate the wide range of recognized industry standards available that can provide guidance to industry without being overly broad or requiring covered entities to engineer for proprietary networks. We therefore decline to adopt CEA's proposal that "recognized industry standards are only those developed in consensus-based, industry-led, open processes that comply with American Standards Institute ("ANSI") Essential Requirements."[247]

103. At this time, we are unable to incorporate any aspects of the Access Board criteria or the WCAG into our rules relating to accessibility of information content. Because the

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[241] *Accessibility NPRM,* 26 FCC Rcd at 3169, ¶ 96 (citing T-Mobile Comments to *October Public Notice* at 5).

[242] 47 U.S.C. § 617(e)(1)(B); *Accessibility NPRM,* 26 FCC Rcd at 3197, Appendix B: Proposed Rules.

[243] In our *Section 255 Report and Order*, the Commission added section 6.9 "Information pass through" to the Commission's rules, which states:

> Telecommunications equipment and customer premises equipment shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide telecommunications in an accessible format, if readily achievable. In particular, signal compression technologies shall not remove information needed for access or shall restore it upon decompression. 47 C.F.R. § 6.9.

[244] IT and Telecom RERCs Comments at 31. The IT and Telecom RERCs subsequently filed an *ex parte* reframing and clarifying its initial comments regarding the definition of accessibility of information content. *See* Letter from Gregg Vanderheiden, Director IT Access RERC, Co-Director Telecommunications Access RERC, Trace R&D Center, University of Wisconsin-Madison, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 10-213, at 1-3 (filed June 17, 2011) ("IT and Telecom RERCs June 17 *Ex Parte*"). In the accompanying *Further Notice*, we seek comment on the IT and Telecom RERCs' specific recommendations regarding how we should interpret and apply the rule.

[245] Senate Report at 8; House Report at 25.

[246] IT and Telecom RERCs June 17 *Ex Parte* at 4.

[247] CEA Comments at 32.

Access Board's process for developing guidelines is still not complete,[248] we believe that it would be premature and inefficient to adopt them at this juncture. We acknowledge, however, that the IT and Telecom RERCs support the WCAG developed by the W3C and argue that "these web standards in the proposed Access Board revisions to 508 and 255 ... should definitely be incorporated in the rules."[249] Because technology is changing so quickly, we encourage stakeholders to use existing or form new working groups to develop voluntary industry-wide standards, including on issues such as encryption and other security measures.[250] We will monitor industry progress on these issues and evaluate the Access Board guidelines when they are finalized to determine whether any amendments to our rule might be appropriate.

104. Finally, we agree with CEA and the IT and Telecom RERCs that, consistent with the CVAA's liability limitations, manufacturers and service providers are not liable for content or embedded accessibility content (such as captioning or video description) that they do not create or control.[251]

5. Phased in Implementation

105. *Background.* Section 716(e) of the CVAA requires the Commission, within one year of the date of enactment of the CVAA, to promulgate regulations implementing Section 716. The accessibility requirements of the CVAA apply to "equipment manufactured after the effective date of the [applicable] regulations" and to "services provided after the effective date of the [applicable] regulations."[252] The recordkeeping and annual certification requirements contained in Section 717 of the CVAA take effect "one year after the effective date" of the regulations that implement Section 716.[253]

106. *Discussion.* The responsibilities of manufacturers and service providers begin on the effective date of this *Report and Order* and are both prospective and continuing.[254] First, the regulations we set forth herein will be effective 30 days after publication in the Federal Register, except for those rules related to recordkeeping and certification. Next, the rules governing recordkeeping and certification will become effective after Office of Management and Budget ("OMB") approval, but, as discussed above,[255] no earlier than one year after the effective date of our regulations implementing Section 716.

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[248] *See* CEA Comments at 33-34.

[249] IT and Telecom RERCs Comments at 31. The WCAG are technical specifications developed by industry, disability, and government stakeholders for those who develop web content, web authoring tools, and web accessibility evaluation tools. *See http://www.w3.org/WAI/intro/wcag.php* (viewed on September 16, 2011). As such, we believe it may be appropriate to consider the WCAG an "industry recognized standard" for purposes of applying our rule (*i.e.,* the requirements of our rule would apply where the accessibility of the content has been incorporated consistent with WCAG specifications), rather than incorporating aspects of the WCAG into our rules.

[250] IT and Telecom RERCs Comments at 30-31.

[251] CEA Comments to *October Public Notice* at 14; IT and Telecom RERCs Comments at 31-32.

[252] 47 U.S.C. §§ 617(a)(1) and (b)(1).

[253] 47 U.S.C. § 618(a)(5)(A).

[254] *See Section 255 Report and Order*, 16 FCC Rcd at 6447, ¶ 71.

[255] *See* para. 105, *supra.*

107. As several commenters recommend,[256] we are phasing in the requirements created by the CVAA for covered entities. Beginning on the effective date of these regulations, we expect covered entities to take accessibility into consideration during the design or redesign process for new equipment and services. Covered entities' recordkeeping obligations become effective one year from the effective date of the rules adopted herein. By October 8, 2013, covered entities must be in compliance with all of the rules adopted herein. We find that phasing in these obligations is appropriate due to the need for covered entities to implement accessibility features early in product development cycles,[257] the complexity of these regulations,[258] and our regulations' effects on previously unregulated entities. As CEA and ITI have stated, we have utilized phase-in periods previously in similarly complex rulemakings.[259] Below, we discuss details of the phase-in process.

108. Beginning on the effective date of these regulations, we expect covered entities to take accessibility into consideration as early as possible during the design or redesign process for new and existing equipment and services and to begin taking steps to "ensure that [equipment and services] shall be accessible to and usable by individuals with disabilities, unless... not achievable [as determined by the four achievability factors.]"[260] As part of this evaluation, manufacturers and service providers must identify barriers to accessibility and usability.[261]

109. Beginning one year after the effective date of these regulations, covered entities recordkeeping obligations will become effective.[262] As we further explain below, we require

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[256] *See* CEA Comments at 39-40; Verizon Comments at 2-3; VON Coalition Comments at 8; CEA Reply Comments at 3-4; CTIA Reply Comments at 4-5; ESA Reply Comments at 22; T-Mobile Reply Comments at 4; TIA Sept. 28 *Ex Parte* at 2; Letter from Scott K. Bergmann, Assistant Vice President, Regulatory Affairs, CTIA – The Wireless Association, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 10-213, at 1 (filed September 30, 2011) ("CTIA Sept. 30 *Ex Parte*").

[257] ESA Reply Comments at 5; IT and Telecom RERCs Reply Comments at 2.

[258] T-Mobile Reply Comments at 4.

[259] CEA Reply Comments at 4 (citing *Closed Captioning Requirements for Digital Television Receivers*, Report and Order, 15 FCC Rcd 16788, 16807 ¶ 56 (2000); *Wireless E911 Location Accuracy Requirements*, Report and Order, 22 FCC Rcd 20105, 20112 ¶ 17 (2007), *voluntarily vacated*, *Rural Cellular Ass'n v. FCC*, 2008 U.S. App. LEXIS 19889 (D.C. Cir. Sept. 17, 2008)); ITI Comments at 19 (citing 47 C.F.R. § 15.119(a); 47 C.F.R. § 15.120(a); 47 C.F.R. § 15.122(a)(1); 47 C.F.R. § 15.117(i)(1)(i)-(iii)); CEA *Ex Parte* in CG Docket No. 10-213 at 2 (citing *Technical Requirements to Enable Blocking of Video Programming based on Program Ratings*, Report and Order, 13 FCC Rcd 11248, 11257 ¶ 23 (1998); *Implementation of Section 304 of the Telecommunications Act of 1996*, Report and Order, 13 FCC Rcd 14775, 14803 ¶ 69 (1998); *Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones*, Report and Order, 18 FCC Rcd 16753, 16780 ¶ 65 (2003) ("*Hearing Aid Compatibility R&O*")).

[260] 47 U.S.C. §§ 617(a)(1) and (b)(1). *See also* CTIA Comments at 17; ESA Reply Comments at 5.

[261] *See Accessibility NPRM*, 26 FCC Rcd at 3170, ¶ 101.

[262] 47 U.S.C. § 618(a)(5)(A). We note that certain information collection requirements related to recordkeeping adopted herein are subject to the Paperwork Reduction Act and will be submitted to the OMB for review. Those requirements will become effective after OMB approval but no earlier than one year after the effective date of rules promulgated pursuant to Section 716(e). After OMB approval is obtained, the Consumer and Governmental Affairs Bureau will issue a public notice instructing covered entities when and how to file their annual certification that records are being maintained in accordance with the statute and the rules adopted herein.

covered entities to keep and maintain records in the ordinary course of business that demonstrate that the advanced communications products and services they sell or otherwise distribute are accessible to and usable by individuals with disabilities or demonstrate that it was not achievable for them to make their products or services accessible.[263]

110. Beginning on October 8, 2013, products or services offered in interstate commerce must be accessible, unless not achievable, as defined by our rules. Several commenters have called for at least a two-year phase-in period for these regulations.[264] By October 8, 2013, we expect that manufacturers and service providers will be incorporating accessibility features deep within many of their most complex offerings, instead of patching together ad-hoc solutions shortly before enforcement begins.[265] Some commenters are concerned that a long phase-in period will leave individuals with disabilities waiting for access to new technologies.[266] Although AAPD is correct that many covered entities have been aware of the existence of this rulemaking,[267] the specific rules were not in place until now. The Commission is also cognizant of the fact that our new implementing regulations will touch entities not traditionally regulated by this Commission. A phase-in date of October 8, 2013 will give all covered entities the time to incorporate their new obligations into their development processes.[268] A two-year phase-in period is also consistent with the Commission's approach in other complex rulemakings, as shown in the chart below:

[263] Recordkeeping requirements apply to manufacturers and service providers subject to 47 U.S.C. §§ 255, 617 and 619.

[264] *See* CEA Comments at 39-40; Verizon Comments at 2-3; VON Coalition Comments at 8; CEA Reply Comments at 3-4; CTIA Reply Comments at 4-5; ESA Reply Comments at 22; T-Mobile Reply Comments at 4; CTIA Sept. 30 *Ex Parte* at 1; TIA Sept. 28 *Ex Parte* at 2.

[265] *See* CEA Reply Comments at 5; IT and Telecom RERCs Reply Comments at 2.

[266] *See, e.g.,* AAPD Reply Comments at 3-4 (proposing a one-year phase-in period); Letter from Paul W. Schroeder, Vice President, Programs and Policy, AFB, and Mark D. Richert, Director Public Policy, AFB, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 10-213, at 1-2 (filed September 28, 2011) ("AFB Sept. 28 *Ex Parte"*); Letter from Andrew S. Phillips, Policy Attorney, National Association of the Deaf, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 10-213, at 3 (filed September 28, 2011) ("NAD Sept. 28 *Ex Parte"*). *See also* IT and Telecom RERCs Reply Comments at 4-5.

[267] AAPD Reply Comments at 3-4.

[268] We believe two years to be consistent with complex consumer electronics development cycles. *See, e.g. Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets,* WT Docket No. 07-250, Policy Statement and Second Report and Order and Further Notice of Proposed Rulemaking, 25 FCC Rcd 11167, 11185, ¶¶ 49, 50 (2010) (*Hearing Aid Compatibility FNPRM).*

Commission Proceeding	Phase-in Period
CVAA	2 years
Closed Captioning Requirements for Digital Television[269]	2 years
E911 Location Accuracy Requirements[270]	5 years
V-chip Implementation[271]	2 years
Wireless Hearing Aid Compatibility Implementation[272]	4.5 years

111. Also beginning October 8, 2013, the requirements we discuss elsewhere regarding peripheral device compatibility[273] and pass-through of industry standard codes and protocols[274] come into effect. The obligation not to impair or impede accessibility or the transmission of accessibility information content through the installation of network, features, functions, or capabilities as clarified above[275] also begins October 8, 2013. We also expect covered entities to provide information and documentation about their products and services in accessible formats, as explained earlier, beginning October 8, 2013.[276]

112. In addition, on October 8, 2013, consumers may begin filing complaints. Prior to that date, the Commission will issue a public notice describing how consumers may file a request for dispute assistance with CGB Disability Rights Office and informal complaints with the Enforcement Bureau.[277] Formal complaints must be filed in accordance with the rules adopted in this *Report and Order*.[278] While the CVAA complaint process will not be available to consumers until 2013, we remind industry that it has a current obligation to ensure that telecommunications services and equipment are accessible to and usable by individuals with disabilities. Consumers may file complaints at any time under our existing informal complaint procedures alleging violations of the accessibility requirements for telecommunications manufacturers and service providers under Section 255 of the Communications Act.[279] Furthermore, separate from the complaint process, the Disability Rights Office in CGB will be available to assist consumers,

[269] *Closed Captioning Requirements for Digital Television Receivers*, Report and Order, 15 FCC Rcd 16788, 16807, ¶ 56 (2000).

[270] *Wireless E911 Location Accuracy Requirements*, Report and Order, 22 FCC Rcd 20105, 20112 ¶ 17 (2007), *voluntarily vacated, Rural Cellular Ass'n v. FCC*, 2008 U.S. App. LEXIS 19889 (D.C. Cir. Sept. 17, 2008).

[271] *Technical Requirements to Enable Blocking of Video Programming based on Program Ratings*, Report and Order, 13 FCC Rcd 11248, 11257, ¶ 23 (1998).

[272] *Hearing Aid Compatibility R&O*, 18 FCC Rcd at 16780, ¶ 65.

[273] *See* Compatibility, Section III.B.3, *infra.*

[274] *See* Accessibility of Information Content, Section III.A.4.d, *supra.*

[275] *See* Network Features, Section III.A.4.c, Accessibility of Information Content, Section III.A.4.d, *supra.*

[276] *See* Manufacturers and Service Providers, Section III.A.4.a, *supra.*

[277] *See* Informal Complaints, Section III.E.2.c, *infra.*

[278] *See* Formal Complaints, Section III.E.2.d, *infra.*

[279] 47 C.F.R. § 6.17.

manufacturers, service providers and others in resolving concerns about the accessibility and usability of advanced communications services and equipment as of the effective date of our rules (*i.e.*, October 8, 2013).[280]

113. Since ACS manufacturers and service providers must take accessibility into account early in the ACS product development cycle beginning on the effective date of our rules, we anticipate that many ACS products and services with relatively short development cycles will reach the market with accessibility features well before October 8, 2013.

B. Nature of Statutory Requirements

1. Achievable Standard

a. Definitions

(i) Accessible to and Usable by

114. *Background.* Under Sections 716(a) and (b) of the Act, covered service providers and equipment manufacturers must make their products "accessible to and usable by" people with disabilities, unless it is not achievable.[281] Section 255 of the Act requires telecommunications providers and equipment manufacturers to make their products "accessible to and usable by" people with disabilities if readily achievable.[282] In the *Section 255 Report and Order*, the Commission adopted definitions of "accessible" in section 6.3(a) and "usable" in section 6.3(l) of the Commission's rules which incorporated the functional definitions of these terms from the Access Board guidelines.[283] In the *Accessibility NPRM*, the Commission sought comment on whether to continue to define "accessible to and usable by" as it has for its implementation of Section 255, or to make changes to these definitions, based on the Access Board Draft Guidelines that were released for public comment in March 2010.[284]

115. *Discussion.* Given that commenters generally agree that the Commission's definitions of "accessible" and "usable" in sections 6.3(a) and 6.3(l), respectively, are "well established," we will continue to define "accessible to and usable by" as the Commission did with regard to implementation of Section 255.[285] We agree with the Wireless RERC that this approach

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[280] Consumers may contact the Disability Rights Office by mail, by e-mail to dro@fcc.gov, or by calling 202-418-2517 (voice) or 202-418-2922 (TTY).

[281] 47 U.S.C. §§ 617(a), (b).

[282] 47 U.S.C. § 255.

[283] *Accessibility NPRM,* 26 FCC Rcd at 3164-3165, ¶¶ 82-83. *See* 47 C.F.R. § 6.3(a) which provides that "[i]nput, control, and mechanical functions shall be locatable, identifiable, and operable..."

[284] *Accessibility NPRM,* 26 FCC Rcd at 3164-3165, ¶¶ 82-83. *See also* Access Board Draft Guidelines.

[285] CEA Comments at 29; TIA Comments at 33; Verizon Comments at 13; Wireless RERC Comments at 6; Words+ and Compusult Comments at 29. *But see* VON Coalition Comments at 7 ("when a company makes a good faith reasonable effort to incorporate accessibility features in different products across different lines, it complies with the Act, even if a particular offering is not accessible."). Consistent with most of the record, in Performance Objectives, Section III.D.1, *infra*, we adopt the same approach to implementation that the Commission used with regard to Section 255. In its Reply Comments, the IT and Telecom RERCs disagree with this approach and argue that the requirements in Part 6 of the Commission's rules should be reframed as goals and testable performance criteria. IT and Telecom RERCs Reply Comments at 5. In the *Further Notice*, we seek comment on the general approach and the specific testable performance criteria suggested by the IT and Telecom RERCs. See Performance Objectives, Section IV.F, *infra.*

will "reduce both the potential for misunderstanding as well as the regulatory cost of compliance" and promote "the objective of consistency."[286] We also plan to draw from the Access Board's guidelines once they finalize them.[287]

116. While we note that there is a great deal of overlap between Section 255's definition of "accessible" and the criteria outlined in the Access Board Draft Guidelines, at this time, we are unable to incorporate the Access Board's draft definitions of "accessible" or "usable" into both our Section 255 rules and our Section 716 rules because the Access Board's process for developing guidelines is not complete.[288] Once the Access Board Draft Guidelines are complete, the Commission may revisit its definitions of "accessible" and "usable" and harmonize them with the Access Board's final definitions, to the extent there are differences.

(ii) Disability

117. *Background.* Section 3(18) of the Act states that the term "disability" has the meaning given such term under Section 3 of the ADA.[289] The ADA defines "disability" as with respect to an individual: "(A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment . . ."[290] In the *Accessibility NPRM*, the Commission sought comment on whether we should incorporate the ADA's definition of disability in our Section 716 rules.[291]

118. *Discussion.* Having received only one comment[292] on this issue and finding that our current rules incorporate the definition of "disability" from Section 3 of the ADA, we adopt this definition, as proposed, in our Section 716 rules as well.[293] To provide additional guidance to manufacturers and service providers, as the Commission did in the *Section 255 Report and Order*, we note that the statutory reference to "individuals with disabilities" includes people with hearing, vision, movement, manipulative, speech, and cognitive disabilities.[294] The definition of "disability," however, is not limited to these specific groups. Determinations of whether an individual has a disability are decided on a case-by-case basis.

b. General Approach

119. *Background.* The CVAA requires that service providers and manufacturers meet

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[286] Wireless RERC Comments at 6. *See also* Verizon Comments at 13.

[287] *See* further discussion of their guidelines at Compatibility, Section III.B.3; Performance Objectives, Section III.D.1; Prospective Guidelines, Section III.D.3, *infra.*

[288] CEA Comments at 29; Verizon Comments at 13; TIA Comments at 33.

[289] 47 U.S.C. § 153(18).

[290] 42 U.S.C. § 12102(1).

[291] *Accessibility NPRM,* 26 FCC Rcd at 3165, ¶ 84.

[292] UC Comments at 22-23 (arguing that the CVAA should apply to people with cognitive disabilities).

[293] 47 C.F.R. § 6.3(d). *See also Section 255 Report and Order*, 16 FCC Rcd at 6428-6429, ¶¶ 18-20. We note that Congress amended the ADA in 2008 to clarify the definition of "being regarded as having such an impairment" and to provide rules of construction regarding the definition of disability. *See* ADA Amendments Act of 2008, Pub. L. No. 110-325, 122 Stat. 3553 (2008).

[294] *See Section 255 Report and Order*, 16 FCC Rcd at 6428-6429, ¶ 20.

the accessibility requirements of Section 716 "unless [those requirements] are not achievable."[295] Section 716(g) of the Act defines the term "achievable" to mean "with reasonable effort or expense, as determined by the Commission."[296] Section 716 imposes a different standard than Section 255. Specifically, under Section 255, covered entities must ensure the accessibility of their products and services if it is "readily achievable" to do so, which the statute defines, with reference to the ADA, to mean "easily accomplishable and able to be carried out without much difficulty or expense."[297]

120. With respect to Section 716(g), the CVAA requires the Commission to consider the following factors in making determinations about what "constitutes reasonable effort or expense":

> (1) The nature and cost of the steps needed to meet the requirements of this section [716(g)] with respect to the specific equipment or service in question.
> (2) The technical and economic impact on the operation of the manufacturer or provider and on the operation of the specific equipment or service in question, including on the development and deployment of new communications technologies.
> (3) The type of operations of the manufacturer or provider.
> (4) The extent to which the service provider or manufacturer in question offers accessible services or equipment containing varying degrees of functionality and features, and offered at differing price points.[298]

121. The Senate and House Reports both state that the Commission should "weigh each factor equally when making an achievability determination."[299] The House Report states that, in implementing Section 716, the Commission should "afford manufacturers and service providers as much flexibility as possible, so long as each does everything that is achievable in accordance with the achievability factors."[300]

122. *Discussion.* As provided in the CVAA and its legislative history, we adopt the Commission's proposal in the *Accessibility NPRM* to limit our consideration of achievability to the four factors specified in Section 716[301] and to weigh each factor equally[302] when considering whether accessibility is not achievable. We agree with AFB that the CVAA requires covered entities to make their products accessible unless it is "not achievable" to do so and that the

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[295] 47 U.S.C. §§ 617(a)(1), (b)(1). *See Accessibility NPRM*, 26 FCC Rcd at 3158, ¶ 67. In the accompanying *Further Notice* we propose to exempt certain small businesses from the requirement to perform an achievability analysis. *See* Section IV.A, *infra*. While that aspect of the *Further Notice* is pending, we will apply the small business exemption on an interim basis. *See* Exemptions for Small Entities – Temporary Exemption of Section 716 Requirements, Section III.C.3, *infra*.

[296] 47 U.S.C. § 617(g).

[297] 47 U.S.C. § 255(a)(2); 42 U.S.C. § 12181(9).

[298] 47 U.S.C. § 617(g).

[299] Senate Report at 8; House Report at 25. *See Accessibility NPRM*, 26 FCC Rcd at 3158, ¶ 69.

[300] House Report at 24.

[301] *See* CTIA Comments at 24; TechAmerica Comments at 6; TIA Comments at 15; T-Mobile Reply Comments at 11.

[302] *See* CEA Comments at 21; CTIA Comments at 25; T-Mobile Comments at 9; CEA Reply Comments at 12; T-Mobile Reply Comments at 11.

Section 716 standard is different from the Section 255 "readily achievable" standard.[303]

123. We will be applying the four achievability factors in the complaint process in those cases in which a covered entity asserts that it was "not achievable" to make its equipment or service accessible. Thus, as proposed by AT&T and supported by many of the commenters,[304] we will be taking a flexible, case-by-case approach to the determination of achievability. We reject the suggestion by Words+ and Compusult that the Commission should evaluate products and services on a category-by-category basis.[305] The approach suggested by Words+ and Compusult would not be consistent with the four factors mandated by Congress.[306] We also share the concerns expressed by NFB and supported by the Consumer Groups[307] that flexibility should not be so paramount that accessibility is never achieved.

124. We note that nothing in the statute limits the consideration of the achievability of accessibility to the design and development stage. While we believe in many instances, accessibility is more likely to be achievable if covered entities consider accessibility issues early in the development cycle, there may be other "natural opportunities" for consideration of accessibility.[308] Natural opportunities to assess or reassess the achievability of accessibility features may include, for example, the redesign of a product model or service, new versions of software, upgrades to existing features or functionalities, significant rebundling or unbundling of product and service packages, or any other significant modification that may require redesign.[309] We agree with Consumer Groups that new versions of software or services or new models of equipment must be made accessible unless not achievable and "that this burden is not discharged

[303] 47 U.S.C. §§ 255, 617(g). *See* AFB Reply Comments at 11. ACB suggests adding seven more factors to the achievability analysis. These proposed factors, which address the commitment of the manufacturer or service provider to achieving accessibility, include (1) engagement of upper level executives; (2) the budgeting process for accessibility as compared to the overall budget; (3) consideration of accessibility early in the planning process; (4) covered entity devotion of personnel during planning stages to achieving accessibility; (5) inclusion of people with disabilities in testing; (6) devotion of resources to the needs of people with disabilities; and (7) record of delivering accessible products and services. ACB Reply Comments at 25-26. While we do not adopt these as additional achievability factors, we do believe they are useful guidance that will help covered entities meet their obligations under the statute.

[304] AT&T Comments at 9; CEA Comments at 21; TechAmerica Comments at 6; TIA Comments at 15; T-Mobile Comments at 9. *Accord*, CTIA Comments at 26 (Commission should interpret the four factors "with the goal of promoting the development and deployment of new advanced communications services."); CEA Reply Comments at 13; T-Mobile Reply Comments at 10-11.

[305] Words+ and Compusult Comments at 21. Words+ and Compusult are concerned that the Commission will not be able to evaluate the many products that are introduced each year. This will not be necessary, since the Commission will be evaluating only those products that are the subject of a complaint.

[306] *See, e.g.*, Achievable Standard, Section III.B.1, *infra*, discussing the specific factors the Commission will consider when determining achievability, including that nature and cost of the steps needed with respect to the specific equipment or service in question.

[307] NFB Reply Comments to *October Public Notice* at 6; Consumer Groups Comments at 16.

[308] *See Section 255 Report and Order*, 16 FCC Rcd at 6447, ¶ 71.

[309] If, however, a covered entity is required by the Commission to make the next generation of a product or service accessible as a result of an enforcement proceeding, an achievability analysis may not be used for the purpose of determining that such accessibility is not achievable.

merely by having shown that accessibility is not achievable for a previous version or model."[310]

125. We expect that accessibility will be considered throughout the design and development process and that during this time "technological advances or market changes" may "reduce the effort and/or expense needed to achieve accessibility."[311] We reject CTIA's argument that requiring manufacturers and service providers to reassess the accessibility of products and services at key development stages would result in companies refraining from issuing new versions of their products.[312] Beyond this conclusory statement, nothing in the record supports this contention. We note that no party has asserted that the identical requirement in the Section 255 context hampered innovation and competition, and there appears to be no reason to believe that it will have such an impact here.

126. Consistent with both the *Section 255 Report and Order*[313] and the legislative history of the CVAA,[314] Section 716 does not require manufacturers of equipment to recall or retrofit equipment already in their inventories or in the field. In addition, consistent with our Section 255 implementation, cosmetic changes to a product or service may not trigger a manufacturer or service providers' reassessment.[315]

c. Specific Factors

(i) Nature and Cost of Steps Needed with Respect to Specific Equipment or Service

127. *Background.* Section 716(g)(1) of the Act states that, in determining whether the statutory requirements are achievable, the Commission must consider "[t]he nature and cost of the steps needed to meet the requirements of this section [716(g)] with respect to the specific equipment or service in question."[316] Both the Senate and House Reports stress the need for the Commission to focus on the specific equipment or service in question when conducting this analysis.[317] The House Report also states that "the Commission [should] interpret the accessibility requirements in this provision the same way as it did for Section 255, such that if the inclusion of a feature in a product or service results in a fundamental alteration of that service or product, it is *per se* not achievable to include that feature."[318] Accordingly, in the *Accessibility NPRM*, the Commission sought comment on its proposal to interpret the achievability requirements consistent with this directive.[319] The Commission also sought comment on whether competing products should be considered when determining achievability and the totality of the

[310] Consumer Groups Comments at 17. *See also Section 255 Report and Order*, 16 FCC Rcd at 6447, ¶ 71.

[311] Consumer Groups Comments at 17; IT and Telecom RERCs Reply Comments at 2.

[312] CTIA Reply Comments at 23.

[313] *Section 255 Report and Order*, 16 FCC Rcd at 6448, ¶ 73.

[314] Senate Report at 9.

[315] *Section 255 Report and Order*, 16 FCC Rcd at 6448, ¶ 72.

[316] 47 U.S.C. § 617(g)(1). *See Accessibility NPRM*, 26 FCC Rcd at 3159, ¶ 71.

[317] Senate Report at 8; House Report at 25.

[318] House Report at 24-25.

[319] *Accessibility NPRM*, 26 FCC Rcd at 3158-3159, ¶ 69.

steps a company needs to take for an achievability analysis.[320]

128. *Discussion.* Consistent with the House Report, we find that if the inclusion of an accessibility feature in a product or service results in a fundamental alteration of that product or service, then it is *per se* not achievable to include that accessibility function.[321] We find that the most appropriate definition of "fundamental alteration" can be found in the *Section 255 Report and Order*, where the Commission defined it to mean "reduce substantially the functionality of the product, to render some features inoperable, to impede substantially or deter use of the product by individuals without the specific disability the feature is designed to address, or to alter substantially and materially the shape, size or weight of the product."[322] We caution, however, that in many cases, features such as voice output can be added in ways that do not fundamentally alter the product, even if earlier versions of the product did not have that capability.[323] Since all accessibility enhancements in one sense require an alteration to the design of a product or service,[324] not all changes to a product or service will be considered fundamental alterations. Rather, the alteration to the product or service must be *fundamental* for the accessibility feature to be considered *per se* not achievable. As we explained in the *Section 255 Report and Order*, "the 'fundamental alteration' doctrine is a high standard and . . . the burden of proof rests with the party claiming the defense."[325]

129. We disagree with those commenters that argue that we should not consider whether accessibility has been achieved by competing products in determining whether accessibility is achievable under this achievability factor.[326] Rather, if an accessibility feature has been implemented for competing products or services, we find that such implementation may serve as evidence that implementation of the accessibility feature is achievable.[327] To ignore such evidence would deprive the Commission of a key element of determining whether achievability is possible. We note, however, that a covered entity may rebut such evidence by demonstrating that the circumstances of the product or service offered by that particular entity renders the feature not achievable.[328] We will consider all relevant evidence when considering the nature and cost of the

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[320] *Accessibility NPRM*, 26 FCC Rcd at 3159-3160, ¶ 71.

[321] *See* House Report at 24-25. *See also* CEA Comments at 21; IT and Telecom RERCs Comments at 21; ITI Comments at 10; NCTA Comments at 6; TechAmerica Comments at 6; TIA Comments at 15.

[322] *Section 255 Report and Order*, 16 FCC Rcd at 6444, ¶ 62. *See also* IT and Telecom RERCs Comments at 21.

[323] *See* IT and Telecom RERCs Comments at 21.

[324] *Section 255 Report and Order*, 16 FCC Rcd at 6444, ¶ 62.

[325] *Section 255 Report and Order*, 16 FCC Rcd at 6444, ¶ 62. Although we are applying the fundamental alteration doctrine to the achievability analysis as a matter of policy adopted herein, we conform the rule definition of achievability as proposed in Appendix B of the *Accessibility NPRM* to the text of the CVAA, 47 U.S.C. § 617(g)(1), by deleting the discussion of fundamental alteration from the rule text. *See* Appendix B, *infra*.

[326] CEA Comments at 22 (to do otherwise would force standardization on proprietary technologies, in violation of the CVAA § 3 prohibition on mandating proprietary technology); TechAmerica Comments at 7; TIA Comments at 15-16; T-Mobile Comments at 3, 9-10. *See also* Verizon Comments at 11; CEA Reply Comments at 12-13; T-Mobile Reply Comments at 10-11.

[327] *See* Words+ and Compusult Comments at 23.

[328] *See* T-Mobile Comments at 10.

steps necessary to achieve accessibility for the particular device or service for the particular covered entity.

130. We also reject CEA's assertion that this factor requires us to consider "the entire cost of implementing the required accessibility functionality relative to the production cost of the product."[329] Under the first factor, the Commission is required to consider the *cost* of the steps needed to meet the requirements of this section with respect to the specific equipment or service in question. The first factor, however, does not provide that the costs should be compared to the production cost of the product; indeed, the factor does not provide for a comparison of the costs at all. As explained further below, this inquiry more directly fits under the second factor, which examines directly the economic impact of the cost of the accessibility features.

(ii) Technical and Economic Impact on the Operation

131. *Background.* The second factor in determining whether compliance with Section 716 is "achievable" requires the Commission to consider the "technical and economic impact on the operation of the manufacturer or provider and on the operation of the specific equipment or service in question, including on the development and deployment of new communications technologies."[330] The *Accessibility NPRM* sought comment on ACB's suggestion that the Commission should compare the cost of making the product accessible with the organization's entire budget when making assessments.[331] It also sought comment on how it should take into account the development and deployment of new communications technologies.[332]

132. *Discussion.* We find that to determine the "economic impact of making a product or service accessible on the operation of the manufacturer or provider,"[333] it will be necessary to consider both the costs of making a product or service accessible and an entity's total gross revenues.[334] Consistent with the *Section 255 Report and Order*, we will consider the total gross revenues of the entire enterprise and will not limit our consideration to the gross revenues of the particular subsidiary providing the product or service.[335] CEA argues that the Commission should not be able to consider an entity's entire budget in evaluating the cost of accessibility because Congress dropped from the final version of the statute a fifth achievability factor which specifically considered "the financial resources of the manufacturer or provider."[336] We disagree.

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[329] CEA Comments at 22. *See also* TechAmerica Comments at 7; Verizon Comments at 11.

[330] 47 U.S.C. § 617(g)(2). *See* Senate Report at 8; House Report at 25.

[331] *Accessibility NPRM*, 26 FCC Rcd at 3160, ¶ 71. *See also* IT and Telecom RERCs Comments at 22-23 (supports ACB); Words+ and Compusult Comments at 23 (supports ACB); ACB Reply Comments at 25. While ACB originally made this argument with respect to first factor, for the reasons explained in the paragraph above, we believe this argument is more appropriately considered under the second factor.

[332] *Accessibility NPRM*, 26 FCC Rcd at 3160, ¶ 72.

[333] 47 U.S.C. § 617(g)(2).

[334] *See* TechAmerica Comments at 8; Words+ and Compusult Comments at 23. *Cf.* ACB Reply Comments at 27 (accessibility is not achievable if the cost of accessibility as compared to the organization's entire budget is extraordinary).

[335] *See Section 255 Report and Order*, 16 FCC Rcd at 6445-6447, ¶ 70 ("[E]valuate the resources of any parent company, or comparable entity with legal obligations to the covered entity, but permit any covered entity (or parent company) to demonstrate why legal or other constraints prevent those resources from being available to the covered entity.").

[336] CEA Comments at 11.

CEA does not suggest a reason why Congress eliminated this language and does not address the possibility that Congress may have found the factor to be redundant in light of the fact that under the second factor we consider the "economic impact on the operation of the manufacturer or provider."[337]

133. We agree with TIA that some new entrants may not initially have the resources to incorporate particular accessibility features into their products immediately.[338] All covered entities should examine the technical and economic impact on their operations of achieving accessibility, as stated in the language of Section 716(g)(2).[339] The need to provide an accessibility feature, however, can have a greater impact on a smaller entity than a larger one. In other words, the provision of a particular feature may have negligible impact on a large company but may not be achievable with reasonable effort or expense for a small business.[340]

134. Some commenters argue that the Commission should consider the cost of implementing accessibility relative to the production cost of the product.[341] CEA suggests that if the cost of accessibility significantly raises the cost of a particular device, it may result in overpricing the device for consumers, which could result in fewer devices being purchased.[342] Similarly, TechAmerica argues that if the cost of an accessibility feature exceeds the cost of having the product in the marketplace, then that accessibility feature is *per se* not achievable.[343] We decline to adopt this *per se* approach. The Commission does recognize, however, that if the nature and cost of the steps needed for accessibility would have a substantial negative technical or economic impact on the ability to produce a product or service, that fact may be taken into consideration when conducting the overall achievability analysis. To completely ignore this fact altogether could discourage manufacturers and service providers from introducing new and

[337] 47 U.S.C. § 617(g)(2).

[338] TIA Comments at 16.

[339] 47 U.S.C. § 617(g)(2). *See* CEA Comments at 24. We reject the proposals that the economic impact must result in "extraordinary loss of profit" or "undue hardship" for the accessibility feature to be not achievable. *See* ACB Reply Comments at 27; Coleman Institute and Samuelson-Glushko TLPC Reply Comments at 22. These proposals go well beyond the CVAA's definition of "achievable" as meaning "with reasonable effort or expense." 47 U.S.C. § 617(g).

[340] For example, a small start up manufacturer may not have the resources to evaluate all the design considerations that must be considered to make a potential product accessible, even though a larger manufacturer might have the resources to do so as a matter of course. A smaller service provider looking for accessible customer premises equipment to provide to its customers may find that the models with accessibility features are available only to larger service providers, or if they are available to the smaller provider, the acquisition price is considerably higher than the price for a larger carrier, thereby rendering such devices cost prohibitive for the smaller provider. Similarly, while a larger service provider may perform as a matter of course a network upgrade that would include the addition of accessibility features, it may not be achievable with reasonable effort or expense for a smaller service provider to perform a similar network upgrade, either because the upgrade is not yet available to the smaller provider or it is cost-prohibitive to the company at that time.

[341] *See* CEA Comments at 22-23; TechAmerica Comments at 7; Verizon Comments at 11. Such cost comparisons may be inappropriate given the flexibility permitted under Section 716 to either build the accessibility feature into every product produced or to rely on third-party solutions made available to consumers at nominal cost on a per-product basis.

[342] CEA Comments at 23.

[343] TechAmerica Comments at 8.

innovative products that, for some reason, would require extremely costly accessibility features relative to the cost of the product. Congress's balanced approach in the statute, including its desire to refrain from hampering innovation and investment in technology, require us to consider the cost of accessibility relative to the cost of producing a product in certain situations.

135. In its comments, ITI proposes that manufacturers and service providers should be given the flexibility to make necessary adjustments during the testing stage prior to fully incorporating accessibility technology. According to ITI, to do otherwise would result in one set of accessibility features for the beta version of a product, and then a second, different set of accessibility features for the final version.[344] The VON Coalition argues that manufacturers of devices used for ACS and providers of ACS should not be subject to the CVAA with respect to products they are testing.[345] We find that, if a covered entity is testing accessibility features along with the other functions of the product or service, to the extent the beta testing reveals that the accessibility features need modification to work properly, then under such circumstances, accessibility would not be fully achievable at the beta stage but would be considered achievable once the modifications are implemented for the final product design.[346] We will not take enforcement action against a manufacturer or service provider in regard to the accessibility of products and services that are being beta tested. We will, however, carefully examine any claim that a product or service is in beta. If it appears that a covered entity is keeping a product or service in beta testing status and/or making it available to the general public for extended periods of time as a means of avoiding accessibility obligations, we will enforce Section 716 with respect to that product or service.

(iii) Type of Operations

136. *Background.* The third factor in determining whether compliance with Section 716 is "achievable" requires the Commission to consider "[t]he type of operations of the manufacturer or provider."[347] The Senate and House Reports state that this factor permits "the Commission to consider whether the entity offering the product or service has a history of offering advanced communications services or equipment or whether the entity has just begun to do so."[348] The Commission sought comment on the extent to which it should consider an entity's status as a new entrant in the advanced communications services market in evaluating achievability and whether the Commission's analysis would be different if such entity has significant resources or otherwise appears capable of achieving accessibility.[349]

137. *Discussion.* Consistent with the legislative history,[350] we will take into consideration whether a covered entity has experience in the advanced communications services market or related markets when conducting an achievability analysis.[351] We disagree with

[344] ITI Comments at 22.

[345] VON Coalition Sept. 6 *Ex Parte* at 5.

[346] *See* OnStar Comments at 8; CEA Reply Comments at 5.

[347] 47 U.S.C. § 617(g)(3).

[348] Senate Report at 8; House Report at 25-26.

[349] *Accessibility NPRM*, 26 FCC Rcd at 3160, ¶ 73.

[350] Senate Report at 8; House Report at 25-26.

[351] *See* CEA Comments at 24; TechAmerica Comments at 8 (taking into consideration a covered entity's status as a comparatively new market entrant in the advanced communications services marketplace will (continued....)